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# Letter Ruling 99-16: Metered Electricity Used in Manufacturing

October 8, 1999

You request a letter ruling on behalf of ("taxpayer"), a manufacturer of high precision filtration devices and systems used in the pharmaceuticals industry. You request a ruling that electricity it uses in its Complex is exempt from sales tax pursuant to G.L. c. 64H, § 6(i). The taxpayer states that it is both a manufacturing corporation and a research and development corporation within the meaning of G.L. c. 63, § 38C.

### Facts

The taxpayer owns and occupies an interconnected series of structures ('the Complex') that house a variety of functions including manufacturing, research and development, warehousing and administration; some areas of the Complex house more than one function.<sup>[1]</sup>

The Boston Edison Company supplies electricity for the Complex, and measures electrical usage at the Complex as a whole by means of a single billed meter. The taxpayer also has it own meters for most of the buildings in the Complex and measures the electricity used by each component of the Complex separately through these internal meters.

The taxpayer's eight internal meters cover six buildings of the Complex (two of the larger buildings contain more than one internal meter); two buildings do not contain internal meters.<sup>[2]</sup> The taxpayer states that the amount of electrical usage registered by the internal meters is smaller than the total electrical usage registered on the billed meter, but the total amount of electricity consumed at the Complex can be accounted for by taking the total from the billed meter and subtracting the electricity used at all facilities that have an internal meter, the remainder being the electricity used by the two buildings without internal meters. In this manner, all electricity used at the Complex is accounted for.

A significant portion of the electrical usage for the taxpayer's manufacturing functions is attributable to environmental control required by U.S. Food and Drug Administration mandates applicable to pharmaceuticals manufacturing. The environmental control functions are performed by environmental control and exhaust ventilation equipment, described as supplying air-conditioning essential to the manufacturing process, and not a matter of worker comfort.

The major environmental control equipment consists of humidifiers, dehumidifiers and clean room machinery. All of this equipment causes physical changes in the products being manufactured. Humidifiers add moisture to these products to make them usable and saleable. Dehumidifiers

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remove moisture from other products in order to make those specific items usable and saleable. Dehumidifiers cause a physical change in the product during the manufacturing process. Clean room machinery creates laminar flow clean air to rinse particles from the surface of the product being manufactured and to remove these particles from the room. This cleansing is a physical change necessary to make specific products usable and saleable.

Electricity is also used in the manufacturing processes to operate assembly and waste treatment equipment. The taxpayer defines "assembly" as "the process by which products are manufactured, starting with materials and ending with the finished product. Assembly equipment is not 'environmental control' equipment . . . ." "[W]aste treatment" is defined as "the post-manufacturing treatment of water and other liquids. . . ."

In its analysis, the taxpayer treats electricity used during the manufacturing process to operate environmental control and exhaust ventilation equipment, as defined, as well as electricity used in assembly equipment, as defined, "as constituting [electricity used] in manufacturing . . . ." The taxpayer treats electricity used in waste treatment as electricity not used in manufacturing.

*Ruling Request*

The taxpayer requests a ruling that electricity used by it in environmental control, as described above, is used for purposes of actual manufacture. The taxpayer also requests that it be allowed to treat a given percentage of the electricity used at its Complex as exempt from sales tax and requests that its method of computing its use of electricity to satisfy the 75% test of G.L. c. 64H, § 6(i) be approved.

*Discussion*

General Laws chapter 64H, § 6(i) exempts, in pertinent part, "sales . . . of . . . electricity consumed and used directly and exclusively in an industrial plant in the actual manufacture of tangible personal property to be sold . . . provided that the exemption . . . shall only be allowed with respect to a metered building, location or premises at which not less than [75%] of the...electricity consumed at such metered building, location or premises is used for the purposes of such manufacturing . . . ." This ruling assumes the Complex is an industrial plant.[\[3\]](#)

*TIR 98-5*

In interpreting the 75% test of G.L. c. 64H, § 6(i), the Department originally applied the test only to electricity measured at a billed meter. Technical Information Release (TIR) 90-7 states that the 75% consumption requirement of § 6(i) is "applied on a billed meter basis. . . . [P]urchases of energy billed on a particular meter are exempt only if [75%] of the energy consumed at that meter is used as described" in § 6(i). Taxpayers, however, experienced administrative difficulties in trying to comply with the billed meter requirement. As a result, the Commissioner issued TIR 98-5, allowing taxpayers to continue to claim the § 6(i) exemption in accordance with the rule of the earlier TIR, or, as an alternative, to apply the 75% test using "safe harbor" rules based, at least in part, on the use of internal meters.

*Actual Manufacture*

Under the terms of the § 6(i) safe harbor, electricity used by a taxpayer to light or air condition a portion of the building, location or premises in which the taxpayer performs actual manufacture will be deemed to be used for purposes of actual manufacture and will thus be counted towards satisfaction of the [75%] test." See TIR 98-5.

*Ruling:* Electricity used by the taxpayer to light or air condition, via its environmental control and exhaust ventilation equipment, areas where the taxpayer performs actual manufacture may be counted as electricity used in manufacturing for purposes of the 75% test. Electricity used by the taxpayer in the operation of assembly equipment is also electricity used in manufacturing and may be counted as manufacturing electricity for purposes of the 75% test.

Research and Development electricity

"Any. . . electricity used for purposes of research and development may be eliminated from the percentage calculation" of the § 6(i) exemption test. See TIR 98-5.

Internal Meters

For purposes of the safe harbor of TIR 98-5, a taxpayer may establish that it satisfies the 75% exempt uses requirement either by reference to the electricity recorded at a billed meter, or, if the taxpayer has internal meters that subdivide the power recorded at a billed meter, by reference to the electricity recorded at each such internal meter. In either of these two instances, a taxpayer may claim the § 6(i) exemption for all of the power recorded on each meter at which the [75%] test is met” The taxpayer may then aggregate all its exempt usage in arriving at a final percentage of exempt electricity. When internal meters are used, the taxpayer may not claim an exemption for electricity (other than electricity used in research and development) at any building without such a meter. In this case, the taxpayer is claiming the § 6(i) exemption by reference to the electricity recorded at its internal meters.[\[4\]](#)

The taxpayer uses the following method to compute the percentage of manufacturing electricity recorded at each internal meter:

- (1) The taxpayer first determines the total amount of electricity shown as used for all purposes - manufacturing, research and development and “non-exempt”[\[5\]](#) -- at each internal meter.
- (2) The percentage of electricity used in manufacturing for each internal meter is then determined by subtracting research and development usage from total electric usage and dividing manufacturing usage by that amount (total usage - research and development = new total usage; manufacturing usage/ new total usage = percent used in manufacturing.
- (3) If the manufacturing percentage meets or exceeds 75%, all of the electrical usage at the internal meter, including research and development electricity and otherwise non-exempt usage, is exempt.
- (4) If the percentage of manufacturing usage is less than 75%, only electricity used in research and development is exempt; in such a case, an exemption for electricity used for manufacturing (and other non-exempt uses) is disallowed.

Using this computation method, five of the taxpayer's internal meters record manufacturing electricity usage of 75% or more, and three internal meters record manufacturing electricity usage of less than 75%. Accordingly all the electricity used at the five internal meters that satisfy the test is exempt; only electricity used in research and development is exempt at the other meters. Thus:

Taxpayer Electrical Usage Year 199x:

	<u>Mfg</u>	<u>R&amp;D</u>	<u>Other</u>	<u>Total Use</u>	<u>% Mfg</u>	<u>Total Exempt</u>
Bldg A (front)	0	1,325	36	1,361	0.0%	1,325
Bldg A (rear)	1,234	0	0	1,234	100.0%	1,234

Bldg B	682	982	18	1,682	97.4%	1,682
Bldg C	3,766	0	0	3,766	100.0%	3,766
Bldg D (rear)	380	356	438	1,174	46.5%	356
Bldg D (front)	78	170	1,451	1,699	5.1%	170
Bldg F1	2,553	0	0	2,553	100.0%	2,553
Bldg F	347	0	53	400	86.8%	400
Bldg E (no meter)	0	696	1,780	2,476	0.0%	696
Treatment (no meter)	<u>0</u>	<u>0</u>	<u>1,350</u>	<u>1,350</u>	<u>0.0%</u>	<u>0</u>
Totals	<u>9,040</u>	<u>3,529</u>	<u>5,126</u>	<u>17,695</u>	-	<u>12,182</u>

Total Exempt/Total Use:68.8%

As the chart above shows, the taxpayer may sum percentages for all exempt electricity recorded at the internal meters; as a result, 68.8% of the electricity used at the Complex is exempt, under the particular set of facts given in this letter.

*Ruling:* The taxpayer's method, as stated above, of computing the amount of manufacturing electricity at its internal meters is approved. All of the power, i.e., manufacturing, research and development, and 'non-exempt' electrical usage, recorded on each internal meter at which the 75% test is met may be used by the taxpayer when claiming the § 6(i) exemption.

The taxpayer may also claim an exemption under G.L. c. 64H, § 6(r) for "sales of materials, tool and fuel, or any substitute therefore, which are consumed and used directly and exclusively...in research and development by a manufacturing corporation or a research and development corporation . . ."[\[6\]](#)

*Conclusions*

(1) Electricity used by the taxpayer to light or air condition a portion of the building, location or premises in which the taxpayer performs actual manufacture is deemed to be used for purposes of actual manufacture and is counted for purposes of the 75% test.

(2) The taxpayer's method, described above, of computing the amount of manufacturing electricity at its internal meters is approved

Very truly yours,

/s/Frederick A. Laskey

Frederick A. Laskey  
Commissioner of Revenue

FAL:DMS:lr

- [1] The taxpayer states that for purposes of the letter ruling request "common areas shared by manufacturing and research and development functions with other functions were treated as not being used for manufacturing or research and development."
- [2] In computing the amount of electricity used for purposes of the exemption, the taxpayer cites ten areas: two of the areas (Building E and the Waste Treatment Plant) contain no internal meters; the other eight areas are comprised of six buildings (Building A Front and Rear; Building B; Building C; Building D Front and Rear; Building F1 and Building F2), which, as noted above, each contain at least one internal meter.
- [3] See G.L. c. 64H, § 6(i): "[T]he term 'industrial plant shall mean a factory at a fixed location primarily engaged in the manufacture, conversion or processing of tangible personal property to be sold in the regular course of business.'"
- [4] TIR 98-5 also gives taxpayers the option of establishing eligibility for the exemption via usage recordings from a billed meter or from internal meters. Taxpayers unable to establish eligibility pursuant to either of those options may also claim the exemption if they can establish either "that a billed meter is dedicated to an industrial plant in which [75%] of the total cubic feet in such plant is used in the actual manufacture or tangible personal property to be sold..." or if "the Commissioner ...approve[s] the use of another reasonable method for computing the use of...electricity at a billed meter...." See TIR 98-5.
- [5] Under the term "non-exempt" the taxpayer includes all electricity that is neither "manufacturing" nor "R&D."
- [6] The total amount of electricity used in research and development on the taxpayer's premises equals approximately 13% of the total amount of power used there.